

**REMARKS**

The Office Action mailed August 17, 2005, has been received and reviewed. Claims 1 through 22 are currently pending in the application. Claims 1 through 22 stand rejected. Applicants respectfully request reconsideration of the application in view of the arguments presented herein.

**Double Patenting Rejection Based on U.S. Application No. 10/351,188**

Claims 1 through 22 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 through 47 of U.S. Application No. 10/351,188. In order to avoid further expenses and time delay, Applicants elect to expedite the prosecution of the present application by filing a terminal disclaimer to obviate the double patenting rejections in compliance with 37 CFR §1.321 (b) and (c). Applicants' filing of the terminal disclaimer should not be construed as acquiescence in the Examiner's double patenting or obviousness-type double patenting rejections. Attached are the terminal disclaimer and accompanying fee.

**35 U.S.C. § 103(a) Obviousness Rejections**

Obviousness Rejection Based on EP 0 716 135 to Hayashihara et al. or U.S. Patent No. 5,434,119 to Satake et al. in view of U.S. Patent No. 5,810,397 to Mehta et al.

Claims 1, 3 through 15, and 17 through 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hayashihara et al. (EP 0 716 135) or Satake et al. (U.S. Patent No. 5,434,119) in view of Mehta et al. (U.S. Patent No. 5,810,397). Applicants respectfully traverse this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

The obviousness rejection of claims 1, 3-15, and 17-22 is improper because the cited references do not teach or suggest all of the claim limitations and do not provide a motivation to combine to produce the claimed invention.

Hayashihara teaches a laser marking composition that includes an ultraviolet curing resin, a leuco dye, and a color developer. Hayashihara at p.2, paragraph [0005]. The laser marking composition also includes additives, such as sensitizers, fillers, or colorants. *Id.* at p. 5, paragraph [0016]. One example of a colorant is carbon black. *Id.* at p. 5, paragraph [0018]. The laser marking composition is coated on a substrate and energy is applied to cure the coating. *Id.* at p. 6, paragraph [0020].

Satake teaches a transparent recording medium that includes a transparent supporting medium and a transparent recording layer. Satake at column 2, lines 47-51. The transparent recording layer includes a developer, a leuco dye, a near-infrared absorbing agent, and a binder. *Id.* at the Abstract. The near-infrared absorbing agent is an inmonium or diinmonium compound, a dithiol nickel complex, a cyanine dye, such as 1,1,5,5-tetrakis(p-dimethylaminophenyl)-3-methoxy-1,4-pentadiene, or 1,1,5,5-tetrakis(p-dimethylaminophenyl)-3-[2,2-bis(p-dimethylaminophenyl)vinyl]-1,4-pentadiene, a squalerium dye, a naphthoquinone dye, phthalocyanine, or a naphthalocyanine compound. *Id.* at column 27, lines 44-58.

Mehta teaches a thermally imageable business record that includes a substrate and a thermally imageable coating. Mehta at column 2, lines 31-36. The thermally imageable coating provides a first color to the thermally imageable business record when activated. *Id.* A desensitizing composition or opaque ink is applied to a selected area of a surface of the thermally imageable business record. *Id.* The desensitizing composition or opaque ink is overcoated with an additional thermally imageable coating. *Id.* at column 2, lines 36-40. The desensitizing composition is an aqueous-based ink. *Id.* at column 5, lines 35-43. The additional thermally imageable coating includes a color former, a color developer, a sensitizer, and a binder. *Id.* at column 6, line 36 through column 7, line 13. When activated, the additional thermally imageable coating provides a second, different color, to the thermally imageable business record. *Id.* at column 2, lines 40-45.

Hayashihara, Satake, and Mehta, when combined, do not teach or suggest all of the limitations of claim 1 because they do not teach or suggest the limitation of “wherein each of

the first antenna and the second antenna is independently selected from at least one compound selected from the group consisting of quinone, a metal complex, azo, croconium, a squarilium dye, a hexafunctional polyester oligomer, [and the recited chemical formulas].” The latter chemical formulas are shown in claim 1 but are not reproduced in the body of this response for the sake of brevity. Hayashihara does not teach or suggest this limitation because Hayashihara does not teach or suggest the compounds recited in the Markush group of claim 1. Even assuming *arguendo* that the Examiner’s statement that carbon black is a radiation absorbing compound is correct, Hayashihara still does not teach or suggest the recited compounds. Satake also does not teach or suggest the recited compounds. While Satake teaches that its transparent recording layer includes a near-infrared absorbing agent, the agents taught in Satake do not include the compounds recited in the Markush group of claim 1. In addition, Mehta does not teach or suggest that its thermally imageable business record includes antennae. Therefore, Mehta necessarily does not teach or suggest the recited antennae.

Since the cited references, when combined, do not teach or suggest all of the claim limitations, the obviousness rejection of claim 1 is improper and should be withdrawn.

As with the prior Office Action, the present Office Action does not specifically discuss how specific independent claims and how the dependent claims are rendered obvious by the combination of the cited references. With regard to the dependent claims, applicants respectfully submit that they are each nonobvious as depending from a nonobvious independent claim. “If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious. (*In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

Claims 3-8 are allowable, *inter alia*, as depending from an allowable base claim.

Claim 5 is further allowable because the cited references do not teach or suggest the recited antennae.

The cited references also do not provide a motivation to combine to produce the claimed invention. To provide a motivation or suggestion to combine, the prior art or the knowledge of a person of ordinary skill in the art must “suggest the desirability of the combination” or provide “an objective reason to combine the teachings of the references.” M.P.E.P. § 2143.01. The mere fact that references can be combined or modified does not

render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *Id.* (emphasis in original).

The Examiner states that use of a sensitizer, as taught in the secondary reference, “in the imaging layers of the primary references would have been obvious to one of ordinary skill in this art in the absence of unexpected results.” Office Action of April 5, 2005, p. 2. However, even assuming *arguendo* that the Examiner’s statement is true, the claimed invention would still not be produced because the limitation discussed above would be lacking

The cited references also do not teach or suggest all of the limitations of independent claims 9 and 15. Since each of claims 9 and 15 recites substantially the same limitation as discussed above for claim 1, claims 9 and 15 are allowable for substantially the same reasons as claim 1.

Claims 10-14 and 17-22 are allowable, *inter alia*, as depending from an allowable base claim, namely claims 9 and 15 respectively.

Claim 11 is further allowable because the cited references do not teach or suggest melting an activator, dissolving an antenna in the activator to form an activator/antenna melt, cooling the activator/antenna melt to ambient temperature, and grinding the cooled activator/antenna melt to a powder.

Claim 12 is further allowable because the cited references do not teach or suggest that the cooled activator/antenna powder comprises particle sizes below 50  $\mu\text{m}$ .

Claim 13 is further allowable because the cited references do not teach or suggest providing a melted accelerator, dissolving an antenna into the melted accelerator, dissolving leuco-dye into the melted accelerator, cooling the leuco-dye/antenna/accelerator melt to a solid state, and grinding the cooled leuco-dye/antenna/accelerator melt to a powder.

Claim 14 is further allowable because the cited references do not teach or suggest that the cooled leuco-dye/antenna/accelerator powder comprises particle sizes below 20  $\mu\text{m}$ .

Claim 19 is further allowable because the cited references do not teach or suggest the recited antennae.

**CONCLUSION**

Claims 1-22 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, the Examiner is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



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